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No. 6.

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Department of Labor and Industry

JOHN PRICE JACKSON, Commissioner.



A BULLETIN OF INFORMATION FOR THE PUBLIC

NOVEMBER, 1914

HARRISBURG, PA.:
WM. STANLEY RAY, STATE PRINTER
1914

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PERSONNEL OF THE DEPARTMENT OF LABOR AND INDUSTRY.

The Commissioner, who has charge and direction of the Department, is John Price Jackson.

The Industrial Board consists of:

George S. Comstock, Mechanicsburg; James C. Cronin, Philadelphia; John P. Wood, Philadelphia; Mrs. Samuel Semple, Titusville; John Price Jackson, Chairman, and Louis A. Irwin, Secretary of the Board.

The Chief of the Bureau of Inspection is Lew R. Palmer, who is assisted by the members of the Division of Industrial Hygiene given below; W. H. Blakeslee, Medical Inspector; Elizabeth B. Bricker, Medical Inspector; Jacob Lightner, Supervising Inspector for Philadelphia; Francis Feehan, Supervising Inspector for Pittsburgh; district inspectors, etc.

The Division of Industrial Hygiene and Engineering consists of John C. Price, Chief of the Division and Chief Medical Inspector; John H. Walker, Civil Engineer and fire prevention expert; Richard M. Pennock, Mechanical Engineer and expert in heating and ventilation; John S. Spicer, Chemical Engineer. The Commissioner and Chief Inspector are members ex officio of this Board.

The Chief of the Bureau of Statistics and Information is Alfred R. Houck, who is assisted by Wilson I. Fleming, Assistant Chief; W. H. Horner, Statistician; Collectors of Statistics, clerks, etc.

Richard M. Pennock is Chief of the Division of Accident Reports.

H. H. Wheaton is Chief of the Division of Immigrant Investigation. This Division is attached to the Bureau of Statistics and Information.

A permanent Chief has not yet been appointed for the Bureau of Arbitration and Mediation. The Acting Chief, F. P. Vincent, is assisted by members of the Department.

The Attorney for the Department is Richard W. Williamson, assisted by Howard Benton Lewis.

James A. Steese is Chief Clerk and has associated with him book-keepers and stenographers.

Publications are under the general direction of the Division of Hygiene with John S. Spicer acting as Editor.

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REPORT OF THE SECOND ANNUAL CONVENTION OF THE AMERICAN ASSOCIATION OF PUBLIC EMPLOYMENT OF- FICES.

MRS. SAMUEL SEMPLE, Pennsylvania Industrial Board.

Upon invitation of the Governor of Indiana, the annual meeting of the American Association of Public Employment Offices was held in the Chamber of the House of Representatives in the Capitol, in Indianapolis, September 24th and 25th, 1914. The President, Mr. F. C. Croxton, of Ohio; the Vice-President, Mr. Joseph V. Cunningham, of Michigan, and the Secretary-Treasurer, Mr. William M. Leiserson, of Wisconsin, were present and in service. Eleven states, the District of Columbia, and the Dominion of Canada reported at the opening session, and other delegates arrived later. At no session did the attendance number over fifty; but probably twice that number were included in the total registration. The importance of the gathering was not measured by its size; for it represented one of the early stages of an attempt to consider and handle the great problem of unemployment from a national standpoint. The intrinsic importance of the occasion was recognized by Governor Ralston of Indiana, who appeared in person, and welcomed the convention in gracious and humorous words, which closed with serious tribute to the work in hand.

The opening session was devoted to the presentation of reports from delegates on labor conditions in their own States or cities. The territory covered ran from Massachusetts to Oklahoma, but most fully represented the Northern Central states and Middle West. Massachusetts was reported as having comparatively little unemployment; and in Oklahoma the situation was depicted as almost ideal, except in the oil fields, where conditions are unsettled, though so recently as to have caused very little suffering as yet. With these two exceptions, the conditions described in the other states were alike—many out of employment; mills and factories running on reduced time; railroad construction lessened, and train service cut; building trades much reduced; shipping at a standstill, with consequent demoralization of employment for longshoremen. A certain degree of adjustment to present conditions was indicated in the fairly general statement that a slight betterment had set in. Interesting exceptions to the general gloom were the facts that the demands for domestic help still outrun the supply and that, to escape the derangement of the trades, the movement is "back to the

farm." This movement has, in some cases, been practically created by the public employment agencies; and in all cases they have fostered it, though faced by the difficulty of low wages, and often poor living conditions, on the farms. Wherever an attempt had been made to handle farm labor the feeling was strong that the first need is to educate the farm employer to care for his men more adequately, and to pay a better wage. If this could be done it would, from the employment agency side reduce the situation to sending farm men back to the farms, or inducing foreigners coming from agricultural life abroad to go to farms in this country rather than to remain in the cities where they land. In parts of Ohio the wages for summer farm labor were reported as \$1.25 to \$1.50 per day, sometimes with, and sometimes without board; during corn harvest the price was six cents per shock, without board; and all-the-year labor was offered \$16.00 to \$18.00 per month. At this price it is difficult to supply farm labor. It was stated that the present demand is for \$20.00 to \$25.00 per month; while in Wisconsin it was reported that the endeavor is to push wages to \$30.00 to \$40.00 per month, with board. Wisconsin plans to add to its state officials a Superintendent of Farm Employment. Missouri reported systematic attention to farm employment. In the month of June of this year ninety per cent of the 13,000 positions secured by public employment offices of that state for applicants were on farms. The Missouri Department of Labor co-operates with the State Board of Agriculture in this work. In many ways the most remarkable story of the convention was that told by W. G. Ashton, Assistant Commissioner of Labor of Oklahoma, concerning the work done by his department in organizing the farm labor market in his state. Representatives of the Department make a survey of the labor needs of the rural districts as harvest time approaches, securing estimates from the farmers themselves in each county of the number of laborers they will need; and the department gathers those laborers within and without the state, seeing that they are delivered to their destinations by the time the wheat harvest opens. As a rule, the farmers are glad to have them arrive in advance, that they may help with the hay, or with other farm work that presses. The preliminary time is paid for at ordinary farm wages, while special prices prevail for the wheat harvest itself. So handled, the great army of harvesters, 20,000 in Oklahoma, move northward with the harvest, to make part of the 40,000 needed in Kansas, and of the 60,000 which handle the wheat in the Dakotas. While several of the delegates advocated systems of bulletins, similar to those of the weather bureau, for securing the supply of labor needed, Mr. Ashton opposed this, as too slow and too uncertain, owing to the frequent failure to remove bulletins

when they have served their purpose. His preference is for use of the press, in general statement, and in up-to-date advertising. His view is that co-operation between states of like agricultural interests is necessary to complete organization of the farm labor market. Mr. Ashton was also most emphatic that it is the duty of State Departments of Labor to undertake this work of organization of the farm labor market. Only so, at present, can the agricultural needs be met fully. Moreover, if such organization is left—as in most states it is—to the railroads and to private agencies, the farm help secured is largely of inferior quality; and the farmer secures even that at the cost to society of the manufacture of tramps, hoboos, and bums, plus the innumerable accidents which result from stolen railway transportation. Mr. Ashton advocates the employment by States of special field agents to keep watch upon the needs of the rural labor market.

In the urban industrial fields an interesting unanimity of expectation of a bad winter was manifested. Wisconsin, through its Industrial Commissioner, Mr. Beck, reported a tendency in that state to protect labor by effecting economies first in the managerial department of large concerns. Many firms are cutting large salaries as much as thirty per cent, clerical salaries about fifteen per cent, leaving labor wages practically untouched. Several cities reported municipal work undertaken at this time with a view to relieving labor conditions, resident men with families being given first privilege of registering for such employment. The most complete system of this sort was apparently that instituted in Toronto as an emergency measure necessitated by Canadian connection with the European War. A Citizen's Committee, co-operating with the city and federal governments raised a fund of \$1,000,000 for employment relief work. Winnipeg and Alberta have already followed the example of Toronto. The work done has been so satisfactory, and such a benefit to the city that at the coming session of the Canadian Parliament it is expected that legislation will be enacted that will put the system on a permanent basis, and extend it to the whole Dominion, with a clearing house at Ottawa. The attitude throughout is that this is government work, and in no sense charity. The general scheme is modelled after the English plan with adaptation to Canadian conditions.

The general impression created by the reports was that economic pressure is at present felt most keenly in the large cities; and that prosperity is in inverse proportion at the present time to the population. Mr. Charles B. Barnes, member of the special United States Commission on Industrial Relations, confirmed this from his observation during a recent trip through the Central States and those

of the Middle West. His interest in that trip was primarily in the condition of the public employment offices; but he incidentally arrived at the conclusion that the smaller cities are suffering least, and that one of the great needs of the labor situation at the present time is better farm wages.

Mr. Barnes threw a bomb into the convention by his formal discussion of public employment offices. He began with a presentation of their history, going back to their first establishment in Ohio, about 1890. They were created in the recognition of the fact that private employment agencies constitute an economic loss, since they waste the time of both employer and would-be employed. He charged the existing systems of such offices with inefficiency, manifested in a lack of proper records and follow-up work. It is estimated that they fill sixty per cent of positions they handle; but exact statistics are lacking. He also charged that such offices cater largely to casual labor, and that thereby they encourage such labor at the expense of the higher grades, who find the public offices not suitable for their needs. He quoted private agencies as testifying that the public agencies are not their rivals, but relieve them of undesirables. He believes that the public agencies have, in general, not lessened exploitation of labor by private agencies; where this has been accomplished, it has been by legislation. Of the public agencies in general, he stated that they are poorly housed (in basements, or on second floors); labor is not handled in classified groups; little advertising or advance work is undertaken; there is no system of exchanging information, and entire lack of uniformity of records; and among superintendents, there is a general lack of activity and knowledge of labor conditions. Mr. Barnes placed the responsibility first on the system of "political plum appointments." He advocated civil service competitive examination, with examinations germane to the business. He scored the general belief that for this work no special training is necessary; and deplored the low estimation in which the business of running even a private employment agency is held. He charged that the attitude of organized labor toward public employment agencies, while on the surface friendly, is in reality that of "mild contempt and considerable suspicion," so that application to such agencies is made only in cases of dire need. Union labor suspects such agencies of furnishing strike-breakers; and, on the other hand, employers are suspicious of the public employment agency, especially if its head is known as a labor man. Mr. Barnes maintained that the public agencies suffer from insufficient appropriations, and from the trap of the desire to present reports as to low price per placement. He then presented a list of remedies for these conditions that he believed would meet them. The first requisite is a good law,

general in principle, but flexible in detail, and establishing civil service throughout the system, from top to bottom. Salaries should be flexible, depending upon service, with advance possible to such a degree as to induce capable men to adopt this as a life vocation. There should be strict impartiality in service as to employer and employed. To secure this, Mr. Barnes recommends an Advisory or Co-operative Committee, made up of representatives from the general public and various organizations. This would bring about a general understanding of the work, secure better appropriations, and a better class of managers. Such public offices should be located in cities offering municipal aid for their running, which would help to combat the rural prejudice that general taxation was used for city work. Absolutely free service should be given to those seeking employment. There should be reporting; adequate advertising; good and convenient housing; separate departments for different classes of labor and for men and women; hours suited to the needs of both employer and employed; sufficient office force and an independent superintendent free from office details, whose duty should be to keep in touch with the labor market and impending changes, and to arrange follow-up work to determine the efficiency of the office, and to plan for addresses and other public presentations on employment.

The civil service position taken by Mr. Barnes was also maintained by Mr. Houk, Commissioner of Labor for Minnesota, who held that a public employment office should not be run by worn out politicians or by worn out workmen; it should not be simply an additional employment office—it should organize the labor market; it should not be a resort for the lowest grade of workers, but a clearing house for the labor market; it should not serve merely its own locality; it should not go on in ignorance of work accomplished, but should follow up its patrons to see how many actually obtain work. To avoid these pitfalls, Mr. Houk held that such offices must be free from outside influence either of political or labor interests and that they must be run entirely on the merit system.

The "Principles and Policies Underlying the Successful, and Efficient Administration of Public Employment Offices" were discussed by Mr. F. C. Croxton, of Ohio, the President of the Convention. The employment office exists for the purpose of bringing together the man who wants work, and the man who wants help. To be successful, the public employment office must prove that it is the most efficient means of accomplishing this. It does not dispense charity, and must not assign a man to a job merely because he needs it, but because he can do it. A successful public office is the only efficient means of regulating the private employment offices. It must be fair to both employer and employed; must give full information,

including that as to strikes where they exist; should make special arrangements for the less efficient laborers; should arrange for vocational guidance for the young; and above all it should not "play politics."

Private employment agencies of the best and most efficient type were described in a paper presented by Mr. A. J. Allen of Indianapolis, Secretary of the Metal Trades Association, a highly specialized private employment bureau operated by the employers in the metal trades, and national in its scope. Mr. Allen presented these offices of his association as "neutral intermediaries" whose object is to "humanize industry and balance business." In his opinion good private employment bureaus are better than public ones, because of the elimination of politics, because they are not flooded with such a diversity of applicants, and because they can make more rigorous investigations. In response to the query as to whether or not such private agencies maintain blacklists, Mr. Allen replied that they do not, but admitted that they would not knowingly place men who are considered trouble makers.

Mr. Leiserson, the Secretary-Treasurer of the Convention, stated that he had invited Mr. Allen as the representative of the best type of private agency in existence to present his view of the case in order that he (Mr. Leiserson) might make his objection to all private agencies in the open, and upon perfectly fair grounds. Even Mr. Allen admitted the need of legislation to regulate such private agencies; Mr. Leiserson advocated their eventual entire elimination. He believes that a national system of labor exchanges, organized by states is the present day need; and feels that such a system should be provided under the Bureau of Labor. Civil service administration throughout, to raise the standard of the business, he deemed indispensable. States co-operating with the national government to work out the system, and the creation of the office of State Superintendent of such exchanges, and of supervisors to help their development more locally were needs that Mr. Leiserson emphasized.

The most insistent charges against private employment agencies came from the State of Missouri, where the Commissioner of Labor, Mr. Fitzpatrick, and his first assistant, Mr. Barrett, have been investigating these business enterprises. Mr. Barrett, who had made many of the investigations in person, denounced the private employment agencies as constituting in general an evil and a menace. He had found many employers, or their foremen, using them as a source of graft. Many teachers' agencies came under the most severe condemnation; so-called schools of domestic science sometimes proved, on investigation, to be nothing but poorly masked and dishonestly conducted employment bureaus; theatrical agencies he had

found to be the worst of all, and were characterized as frequently the avenue of approach to the white slave trade. Aside from these extreme charges, the practices of split fees and continuous percentages were noted as abuses. It is the contention of the Missouri Commissioners of Labor that as a class, private employment agencies live by extortion and dishonesty; that regulation is never successful; and that abolition is the only remedy.

As opposed to this view, Mr. Hammond, Vice Chairman of the Industrial Commission of Ohio, held that private agencies are better than none, and that in the present lack of development of State and National labor exchanges, we must depend upon carefully regulated private agencies for a needed service to society. In the way of regulation Mr. Hammond recommends small and uniform booking fees, with refund provision for failure of service, and requirement as to greater care in character of positions handled. Ohio requires private employment agencies to give bond, and the next Legislature is to be asked to give legal basis for suing on such bond. It is expected that this will make the bonding firms more careful, and will help to regulate the private agencies. Ohio has also a special supervisor for these agencies.

Labor exchanges for women were discussed by Mrs. Atwood, of Duluth, Minn., who spoke from experience in that line. She believes that such work is more complicated than similar service for men, and that it must be conducted more from the point of view of social service and of regard for the individual. Her own work in Duluth is backed by a public welfare committee, and is under the city government. Labor exchanges for women in small towns and in the rural communities she believes would be a great protective measure.

Mr. Walter L. Sears, long connected with the municipal employment agency of Boston, and recently removed to New York, a pioneer in the work of bringing the State into organization of the labor market, presented his belief that the whole problem of employment is really that of the distribution of labor, with the attendant question of transportation. This distribution must be managed so as not to flood the local labor market; neither must labor be kept out in order to raise wages. Care must be exercised not to paternalize labor; information, not material relief, should be given. Mr. Sears believes the Federal Government the proper agent to accomplish this, and also that special legislation is not needed—only an appropriation under the existing Department of Labor—since the Act of 1907 already provides for a Department of Information. Mr. Sears advocated the bulletin system, based on a need of five hundred workers, in handling the labor market, and cited the use

of such bulletins after the Salem fire. So successful was the system then that the emergency camp was closed in five weeks.

Hon. Royal Meeker, Commissioner of Labor Statistics, Department of Labor, Washington, presented a most interesting discussion of the "Relation of the Public Employment Office to the Problem of Unemployment." Co-operation to secure a continuous and continent-wide census of unemployment he stated as the first need. Arrangements for that can be best made by state agencies, through letters to trade unions, chambers of commerce, employers' associations, and all other promising avenues. Such a census should be at least monthly, and would even then be imperfect. New York has already offered co-operation for such work, and the American Federation of Labor has been approached as to its willingness to help. Preliminary to such effort Dr. Meeker suggested that it may be necessary to agree first upon a definition of unemployment; since that term is not the same as idleness. The Federal Bureau of Labor, Dr. Meeker believes, should concern itself primarily with statistics—finding out first how many jobs there are in the country; second, what wages are paid in them; third, what hours they require. We need to know what labor is to be performed, and how it is distributed. The Federal Labor Bureau should not usurp employment office work. Upon the accuracy of its statistics will depend the general insurance against unemployment. Discussion of Dr. Meeker's paper brought out the fact that police departments are not the proper agencies for securing statistics on unemployment; that uniformity of methods in different states is desirable; and that the house to house survey as used in Toronto is efficient.

The closing session was devoted to a discussion of certain tentative proposals for legislation on the matter of public and private employment offices as prepared under the care of the United States Commission on Industrial Relations. The scheme there outlined, changed in some particulars by suggestions already received, and by some made at the Convention, will be the basis of legislation sought from the next Congress.

The Convention took action in the way of creating a committee on uniform system of public employment offices and records; it went on record as favoring ultimate elimination of private employment agencies, and prepared itself to present a resolution to the Industrial Relations Commission, and to Congress, recommending legislation in separate states looking to the creation of public agencies; and it put itself on record as in favor of recommending to the Federal Government a definite plan for a system of such agencies.

Pennsylvania presented from its Department of Labor and Industry an invitation that the next convention of the Association

should be held in Harrisburg; but it was decided by the Committee on Place to meet next year in Detroit.

In summing up the Convention, it may be said that it left certain definite impressions. The first of these is that the matter of unemployment is one of the most important economic problems of the day, and that it threatens for the immediate future to become acute. Second, the only reasonable protection against unemployment is the organization of the labor market for the avowed purpose of bringing together the "jobless man and the manless job." Third, the State, as opposed to the private individual, seems to be the proper agent for performing this service to society. Fourth, the merit system in appointment seems to have made itself felt as the best guarantee that this service on the part of the State shall most surely be fulfilled.

ACCIDENT PREVENTION.*

Mr. David Van Schaack, Director of the Bureau of Inspection and Accident Prevention, Aetna Life Insurance Co.

"Mr. Chairman, Ladies and Gentlemen: I hesitate to discuss the subject of accident prevention before you because I know that much of what I shall say has already been said by others better qualified than I am to speak upon this subject. At the same time I think that in connection with a matter of such deep concern to us all there cannot be too much reiteration of the essential points. How deep that concern really is, has only recently come to be at all generally appreciated. Dr. Hoffman has told you about our annual industrial accident record, the great number of deaths and injuries. Such a record is not only shocking to our moral sense, but is a grave reflection upon our economic wisdom.

From the moral and the humanitarian standpoint, the prevention of preventable accidents is not an altruistic favor to anyone. To eliminate pain suffered by injured men and their possible lessened enjoyment of life, to reduce sorrow felt by the people of those killed or badly hurt, to diminish the misery of the world, is a plain duty which admits of no argument. It is simple justice.

Viewed from the economic side, whether broadly or narrowly, the necessity for accident prevention should be just as evident.

*Part of the proceedings of the First Pennsylvania Industrial Welfare and Efficiency Conference held at Harrisburg, October, 1913.

The brains and brawn of a nation are its greatest asset, far greater than any of the material resources which we are now so carefully conserving. Any drain upon this asset is a calamity, any avoidable dissipation of it, a crime.

Industrial accidents mean a distinct decrease in the productive power of the community, future as well as present. Besides destroying or curtailing the working capacity of the injured men themselves, they result in loss of educational opportunity to the next generation, and consequently in its lessened usefulness throughout life.

They are also a drain upon the wealth already created. The money which is paid out in compensation or damages, great as it is in the aggregate, is only a part of this drain, I might say, but a small part. When a workman is thus withdrawn from the wage-earning class, there are, sooner or later, many other calls upon accumulated funds. The economic balance in the workman's home is disturbed. There is medical expense; possibly, the cost of hospital care; possibly too, the expense of litigation. The injured man may have to be supported in his old age. It may be necessary to care for dependents. In one way or another, there is sure to be a demand that the loss caused by the worker's inability to continue doing his full part in the world's work be made up. It is immaterial how this demand is met, whether by the worker's own savings, by mutual benefit associations, by insurance, by public or private charity, by taxation; it is economic waste.

The waste due to industrial accidents is evident, too, in another way, which comes closer home to the employer who stops to consider what accidents cost him, or the consumer through him. This is in the diminished efficiency of the plant.

The occurrence of an accident distracts other workers in the vicinity, stopping their productivity for the moment at least and curtailing it for some time. If the accident has distressing features, it may be days before those who saw or heard of it regain their normal rate of working speed. Frequently there is a complete stoppage of work on account of an accident.

Then, there is the loss due to the disability of the injured employee, the diminished productiveness while the place of one temporarily disabled is held open for him or a new man is being trained to take the place of one permanently disabled; the time which a foreman or other worker has to take from other productive employment in order to give such training; the defective work which a new hand turns out; the scrap loss which he often causes.

All such interferences with the ordinary course of a plant's work, cause a loss of efficiency which is distinctly measurable in cold dollars and cents. An idle machine, or one not working to its full capacity, is an expensive luxury. Moreover, the overhead expenses

of the plant are running on just the same, but without the same degree of offset as if the accident had not occurred. One manufacturer told me some time ago that within a year there were 2,100 days of absence on the part of his machine hands, and that each of these days meant a loss of \$7.50 to the concern, a total of \$15,750.

In view of all the considerations outlined, the *why* of accident prevention should be clearly evident; the *how* is another matter.

To begin at the beginning, the success of accident prevention work depends, in the first instance, on the attitude of the employer, and his chief lieutenants. If they are not keenly interested in the matter, very little can be accomplished.

With the management once convinced, and it is hard to see how they can not help being convinced, that accidents must be reduced, the initial step is organization. I believe that the chief reason for our national backwardness in this important work, aside from our absorption in material development, is that what is anybody's business or everybody's business is pretty sure to be nobody's business. To use a slang phrase, the prevention of accidents has been too much a case of "Let George do it."

It is the experience of every large industrial concern, as well as of all other agencies which have taken an active interest in preventing accidents, that if a successful safety campaign is to be waged, a comprehensive organization to formulate and carry out a definite plan or program for such a campaign, is absolutely essential.

The necessity for organization in safety work is apparent when we consider that a many-sided problem is involved in accident prevention. Broadly speaking, it may be said to include as its chief branches:

First, ascertaining the actual conditions of risk under which employees in any one plant perform each task, and determining the practical possibilities of eliminating or reducing this risk.

Second, the provision of proper working conditions, and of efficient safeguards for dangerous machinery and appliances;

Third, careful selection, instruction and supervision of workmen, and the assignment of them to work for which they are not unsuited;

Fourth, the promulgation of rules for safe working, and their rigid enforcement, and

Fifth, the inculcation of habits of caution in the minds of all concerned.

It takes only a few words to outline this program, but it is a mighty big task to carry it into anything like full effect; a task requiring not only scientific investigation of the causes of accidents and careful assignment of the work of eliminating these causes, but co-operation all along the line, and education from top to bottom.

Only through organization can this be done in a manner which will get real results, which will not only find out what can and should be done, but will adopt the best way of doing it, will bring engineering training to bear upon mechanical problems, and will unite all the necessary factors of agency in the teamwork,—that cordial pull-together, which is so vitally essential to success in any line of effort depending upon more than a single man. Only through organization can the plant problem be seen as a whole, so that safety work will help, and not hinder, the work of the shop.

Perhaps the most notably effective system of organization in safety work is that adopted by the subsidiary companies of the United States Steel Corporation, which, through their safety committees, central, plant, foremen's and workmen's, have brought officials, superintendents, master mechanics, safety inspectors, foremen and men together in a comprehensive campaign.

The same sort of organization is not possible, of course, in all industrial concerns, but, no matter how small a plant may be, there can be some organization, some planning of work and then working of plan, some one competent man, if no more, whose *business* it is to see at least that dangerous places and machinery are guarded and the guards maintained, and that workmen are urged to use the guards provided and otherwise to do their work as safely as possible.

Time will not permit of dealing in detail with each of the chief branches of accident prevention work mentioned, but, before emphasizing one or two, I want to make passing reference to others. One of them is the provision of proper working conditions. These include, among many other things, the furnishing of an adequate supply of properly distributed light, keeping a mill well cleaned up and orderly arranged, and seeing that structure, machinery, tools and other appliances are always in proper shape. Regular inspection of all structures and equipment will prevent many accidents by discovering in time dangerous conditions which eventually would surely cause injuries. Needless to say, it is equally conducive to economical operation. So, too, are neat surroundings, which exert a considerable influence in making workmen both more cautious and more efficient. The same may be said of good ventilation, up-to-date sanitary conditions, everything in fact which contributes to the worker's well-being. The importance of proper working conditions in accident prevention is too often underestimated.

Just a word about rules for safe working. They are a mighty good thing—if they are thoroughly practical and every one of them is rigidly enforced. Overlooking violations of a single rule in a set, lessens the force of all the others. It is like the weak link in the chain.

Workmen can well be selected for their caution as well as for their ability to do work. A reckless employee, no matter how skilled he may be, costs his employer more money than he is worth. Every workman should be carefully instructed in his work, not only in how to get results, but in how to avoid danger to himself and others. The stitch in time adage applies nowhere better than here. In assigning a man to work, and in keeping him at it, his personal characteristics should always be duly considered. Both efficiency and safety are endangered when a heavy, slow-thinking man is on a job requiring mental alertness and bodily agility.

Coming to safeguards proper, safety devices as they are commonly called, the providing of them comes early in a safety campaign, and deservedly so. We have passed the day of thinking that all preventable accidents can be prevented by safeguards, but their field is a very important one. They will prevent a great many of the more serious accidents, and they will often lessen the seriousness of those which they cannot wholly avert.

Another very important function of safeguards, is that of impressing upon the employee the sincerity of the employer in his desire to prevent accidents. He cannot consistently ask the workman to do his share in accident prevention unless he is doing his own. Spending money, however, in a way which the employee cannot help seeing will work to his benefit, is the best sort of guarantee of good faith.

Safeguards are also often a great aid in promoting efficiency. There are many instances where they increase the product. Every workman spends part of his time protecting himself against injury. In some extreme cases this part is as much as nine-tenths of the total. The safer conditions are made, the more the workman's time can be devoted to turning out product.

In the providing of safeguards, the matter of their design is of the utmost importance. Not only must they be really guards—not traps posing as guards—but they should be such that the workman will have as little temptation as possible to remove them. They should not be cumbersome, they should not make the operation of machines any more difficult and they should not permanently reduce production.

Speaking of the safeguarding of machinery, very much indeed can be done to promote safety in the designing of machinery and its equipment with guards at the time of its manufacture. Not only can safeguarding often be done better then, but it can be done more cheaply. When a machine is built without safeguards, either in fact or in mind, it is sometimes impossible to provide effective guards for gears and other dangerous moving parts because of lack of clear-

ance; whereas slight changes in the original design would have made good guards possible, and they could have been provided at practically a negligible cost.

Most makers of machinery will supply guards if the purchaser wants them; in fact many are now furnishing them as standard features of machines, and it is encouraging to note the increasing number of purchasers who are not only including requirements for guards in their orders, but are printing on the letterheads of their purchasing departments statements to the effect that provisions for safeguarding workmen should be brought to their attention, as such will be taken into account in placing orders for new machinery and equipment. Where the machinery is built in your own plant, the same object can be attained by having the designs checked over for safety.

To illustrate how seriously the safeguarding part of the accident prevention problem can be, and has been approached, I am going to run through a few pictures which I hope will prove of interest. They show chiefly guards of home manufacture, and some of them, doubtless, one or another of you will recognize. I wish I could spare the time to acknowledge the courtesy of the individual source from which each came.

(Mr. Van Schaak showed the following slides:

Guards around fly wheels and condenser pump in mine engine house; also a railing and stairway to pillow block and shield for the crank.

Lifting screen guard for a flywheel where there is no room for a fixed guard.

Elaborate system of giving approach to overhead shafting.

A motor guarded by pipe railing and mesh and slanting drive belt running in a trough of reinforced mesh.

Elevator gate built both high and low enough.

Simple railing to prevent men approaching a railroad track and being run over by a car which they cannot see until it is close to them.

A big wood planer fenced in with wire mesh screens and angle iron frames.

A swing saw guarded.

A band saw guarded.

Automatic pierced aluminum guard for a jointer.

Shafting and gearing of roller tables in a steel mill protected; also a railed bridge for crossing the rolls in safety.

Guarded overhead traveling crane.

Completely guarded locomotive crane.

The sort of foundrymen's shoes and pants which will prevent many accidents, sold to workers by the management of some plants at cost.

Shows what goggles do. Nearly a hundred pairs turned in in damaged condition and not a man who was wearing them injured.

How tumbling barrels in a foundry are sometimes guarded.

Tumbling barrels unguarded and guarded.

A push feed for a re-drawing operation with a punch press.

Another safe method of feeding where the work is brought into proper position by the descending ram.

A punch press safety device to prevent the clutch engaging while the operator's hand is in the danger zone.

A two-hand feeding arrangement for a punch press.

Hand guard for punch press; open.

Spindle gears on a drill press guarded.

Bench drill presses run by girls with spindles and spindle belts guarded, with metal shields for the girls' skirts, and with machines set back to keep the driving gear between the tables.

A hand miller with an adjustable guard for the cutter; the belt and pulley shielded; and a safety latch to hold the head up.

Guarding of grinding wheels, showing safety flanges, hoods arranged so as also to protect the arbor end; plate glass shields to protect the eyes, and the belt enclosed.

Heavy round bar stock piled so as to prevent accidents; incidentally to economize space.

Portable ladder with pivoted feet.)

When we come to consider the inculcation of habits of caution as a means of accident prevention, we reach the most difficult, and at the same time, the most important part of the problem. The several means already touched upon can accomplish a great deal, but any accident prevention campaign must fail largely in its purpose unless the co-operation of the workmen themselves is secured. As a great safety leader recently said, safety men are far more important than safety things.

Some of this co-operation can be obtained through the right sort of foremen; men who are both imbued with ideas of caution and who are strict disciplinarians. The foreman is apt to be looked up to as a sort of leader by the men under him, and they are more easily influenced by him than by those higher up in the organization. In a sense they consider him as one of themselves, a man who has been through the same experiences they are undergoing. He is closer to the workmen in every way than anyone else in the plant can be, and by a combination of moral suasion and discipline he can help prevent many accidents which are otherwise difficult, if not impossible, to prevent, such, for instance, as those due to the removal of safeguards, to horse play, and to the wearing of unsuitable clothing.

Incidentally, he can also be of the greatest service in the determination of the exact cause of each accident with a view to avoiding recurrence.

The foreman is such an essential factor in accident prevention that his active aid must be secured. A long step toward securing it is taken when it is impressed upon him that he will be held personally responsible for the prevention of accidents as well as for the doing of the work, and that his success in each will be duly taken into account, by a bonus system or in some other way.

The foreman cannot do it all, however. He cannot make men over again, nor can he watch each workman all the time to see that he does none of the innumerable things which, whether they originate from ignorance, from thoughtlessness, or from fool-hardiness, are constantly placing men unnecessarily in danger of injury. Despite all that a foreman can do, workmen will wipe machines while they are in motion, they will leave parts of their bodies under heavy pieces that are being hoisted, they will brush chips from under revolving cutters with their fingers, they will take short cuts through dangerous places, they will start to drill without securely fastening the work—in fact the list of what they will do in spite of any precaution is practically endless.

(Mr. Van Schaak showed the following dangerous practice slides:

A workman riding on the loose coupling bar of a locomotive crane.
One result of such a practice.

Sitting on locomotive crane platform in danger of being crushed between tank and platform.

Unsuitable clothing for a foundryman taking off a heat. What happens to a cotton shirt and hat.

Pouring a mold with foot and leg directly under the ladle.

How not to carry a hand ladle. Man is also wearing the objectionable cotton gloves.

Looking directly into the riser of a mold while it is being poured.

Dangerous way of piling flasks.

Unsafe way of hitching a sling on the trunnion of a flask.

Improper way of hooking up flasks.

Riding on material being moved by a crane.

The dangerous and unnecessary practice of coupling air hose between moving cars.

Jumping off engine footboard backwards).

The only possible way of preventing accidents due to such causes is to secure the willing and active co-operation of the workmen themselves, by interesting them in safety for both themselves and others, by inculcating habits of caution in them.

One of the most effective means of bringing this about is to have the men serve on such safety committees as I have mentioned, which go about the plant once a week or month, looking for dangerous places, and the means of guarding them, seeing if the safeguards provided are always used, and observing if the workmen are doing their work as safely as possible. This not only results in better safeguarding and working methods, for in many respects no one knows so well as the workmen themselves what is really needed to prevent accidents, but it also greatly stimulates the interest of the men in safety. The personnel of these committees is changed from time to time, so as to get the widest range of suggestions and to bring as many men as possible within this sphere of influence, and each man who has served on a committee is urged to consider himself an unofficial safety inspector ever afterward, keeping up his active interest and making any suggestions that may occur to him.

While the safety committee is one of the most notable among the methods employed to secure the co-operation of the workmen, many other means of arousing their interest, and keeping it aroused, have been found effective. Among these are such things as signs at employment bureaus to the effect that only careful men are wanted, signs at entrances to works urging caution and safety practices, safety slogans, little sermonettes of safety, printed on the backs of pay envelopes, on slips attached to pay checks, and on time records and other forms largely used in mills, supplying paperweights bearing safety symbols and catchy phrases tending to keep safety uppermost in the mind of foremen and other employees having desks, distributing cigars bearing bands with safety emblems and safety slogans on them, furnishing for general wear or as badges of distinction, safety buttons having on them striking color design and some such wording as "Safety First," "Boost for Safety," or "Get the Safety Habit," using safety bulletin boards to show how accidents happen and how they can be avoided, and the giving of safety entertainments.

All these methods of enlisting the co-operation of the workmen have proved to be very effective and have done a great deal to reduce the number of accidents which are otherwise unavoidable; but even they leave much to be done. We shall never attain the highest possible measure of accident prevention until we have a body of workmen in this country who from the very time they begin to work are firm believers in safety.

The man who has been working at his trade for years is set in his ways and intolerant of change. He clings to his trade practice like the nobleman of old to his honor. Not only does he instinctively object to any variation from the working methods which he learned in his youth, but in many cases he is firmly convinced that any departure

from reckless ways would cause him to lose caste among his fellows. There are many thousands of these men, whom no safety campaign will influence in the slightest degree and whose opposition to change also has an unfortunate effect upon others who, but for their attitude, might be properly influenced.

Though these men cannot be changed, they will ultimately be replaced by a new generation, and this new generation can and should be made very different from them. One of the greatest fields for productive safety work is among the workmen of the future, through systematic education in safety. This education can well be given, not only to apprentices in our shops, but in the industrial schools, in the training departments of our great industrial establishments, in the vocational schools, in the manual training departments of our public schools, and, to some extent possibly, even in the ordinary school classes. If habits of caution are inculcated in our future workmen during the formative period of youth, when they are most inclined to be receptive, they will cling to them throughout life.

This education of the rising generation of workmen is looking well toward the future. It will be a slow process, and the beneficial results of it will become manifest only by degrees and in the course of time but eventually it cannot fail to have far-reaching effect upon the measure of accident prevention attainable. It will produce a steadily increasing number of workmen who, not only will tolerate safeguards and will cheerfully use them, but who, from force of habit, will be addicted to safe methods of working.

I wish I could spare the time to show you some figures illustrating what has been done in accident prevention by such companies as the United States Steel Corporation, the International Harvester Company, the Pennsylvania Railroad Company, the New York Central and Hudson River Railroad Company, Fairbanks-Morse and Company, and many others. They show what can be accomplished by earnest and organized safety work.

These are but a few examples of what is being done by many industrial concerns, and they are increasing in number every day. In accident prevention, we are getting away from the heedlessness of our youth as a nation; we are awakening to a realizing sense of what a shocking waste industrial accidents are, and our privilege and duty in reducing them to the smallest possible number.

I use the words privilege and duty advisedly, for while I have no doubt that there are instances where the force of the law was required to awaken us, and where the additional stimulus of mercenary interest was necessary to spur us on, I believe that back of the whole movement is an increasing spirit of right-mindedness, a spirit which, through organization, co-operation and education, is working a wonderful change in our industrial conditions.

THE SAFETY MOVEMENT.*

DR. LUCIEN W. CHANEY, Dept. of Labor, Washington, D. C.

Somewhere not long ago I saw those engaged in efforts at social betterment divided in three classes, social reformers, social leaders, and social engineers. The first class by the vigor of their agitation stir the attention of the public. The second by the inspiration of their personal presence draw men after them into action and accomplishment, the third discover and apply fundamental causes which continue to produce results when they are gone.

The safety movement has had reformers and leaders. It is a wonderful crusade which has been made in the last few years for the conservation of human energy. We are now fast approaching the stage when further progress will depend on whether we are as good engineers as we may have been reformers and leaders.

The movement in its present stage is very clearly an engineering problem. The conviction that accidental injury can be lessened and, because it can be, should be, is now so widespread and well defined that there is but little need for the reformer's eloquence. The convinced, not to say convicted, industrialist is everywhere asking—"How?" The engineering answer is, organization. It may not be at once apparent that I am using this word correctly. Let me illustrate. We need a machine for a certain purpose. The materials, the mechanical principles, the artisan's dexterity, are all in existence. These must be combined by the skill of the engineer, organized in other words, so that the parts of the ultimate mechanism shall work in balanced harmony.

I presume that, when I was invited to discuss this subject, shop organization may have been uppermost in the mind of those making up the program. I shall permit myself a somewhat broader consideration since there are many who could speak with much greater authority regarding the details of shop management.

I think a fundamental principle of all organization for safety is that it must begin at the top. What is the top? In my judgment, it is the governmental agencies which are supposed to control these matters. It is an open secret that, with all the excellent and valuable things they have done, such agencies both here and abroad are in very considerable measure a failure in securing the end sought, namely, safe working conditions.

*Part of the proceedings of the First Pennsylvania Industrial Welfare and Efficiency Conference held at Harrisburg, October, 1913.

Why this imperfect measure of success? Because they have been based on coercive principles rather than constructive. Very many of our methods of government are inherited from the ideas developed by warfare. We have moved far enough to escape the fact. The cheering element in the condition of our State organizations is the development of industrial boards which have the power and opportunity to act in a co-operative way with industrialists instead of applying coercion to them. Let me say with much emphasis that Pennsylvania will take its rightful place among the leaders of the movement for industrial safety in proportion as it develops the co-operation idea. We hear much about law enforcement. We need to hear about it. But who enforces the law so far as I am concerned. I do. None other. To serve one manufacturer who willingly enforces the spirit of law upon himself is greater gain than many prosecutions. This ought to have been done while not leaving the other undone.

We are at the parting of the ways in this matter of civil organization. We can proceed as we have done and accomplish much, or we can adopt a new, though not untried attitude, and open the way to ultimate achievement, of whose scope we have little notion. Having begun at the top with the State bureau, how shall it be projected outward to the employers of the State? First, by calling them into council in the development of the orders prepared by the industrial board. Second, by the use of exhibits and lectures by which the State undertakes to come into vital contact with every organization of employers within its borders. Third, by some such driver as that being worked out in New Jersey by General Bryant, where some member of each industrial organization embodies the interest of the State in the conditions of the plant.

What shall we say about organization within a plant? First, let me pay my respects to the ideas embodied in the word "standardizations." Our ideas of government are derived largely from warfare. Our ideas of standards are derived from mechanics. Neither war nor mechanics can set standards for men. Insofar as our safety problem is mechanical, let us by all means have standards. But it is to only a small degree mechanical. It is human. We must beware lest in urging standards on the human side we forget that variety and not uniformity is the prime and essential characteristic of human progress.

Why have our public schools been assailed in recent years with such vigor? They had become standardized. By what standards? Those derived from the old time classical college. Let no one suppose for a moment that I underrate those institutions and the tremendous service which they have rendered and which their successors are rendering. I was brought up in them. I am a part of them.

But I see very clearly that our public schools must set themselves to tasks not dreamed of in the days when the classical college was supreme.

The manufacturer who permits what someone else has done to constitute the standard of what he will do, will never really get into the spirit of safety work. He may get helpful ideas from those who have accomplished things but he must assimilate them and make them his own and when he has done so they will be almost sure to appear in forms quite different.

I refrained at the last from publishing in my report on the iron and steel industry a set of operating rules, partly because I feared someone might adopt them. I am a great believer in the maintenance of individual initiative. I have no liking for the sort of standardization exemplified in the limerick:

There was a young lady of Niger,
Who went out to ride on a tiger,
They came back betide,
The lady inside,
And a smile on the face of the tiger,

standardized by tiger standards.

In short, in plant organization we should encourage variety both for the sake of the plant and for the sake of the movement. Experiment in a multitude of diverse directions is the basis of all sound scientific progress.

After what I have said no one will expect me to attempt the outlining of a standard scheme of shop organization, least of all, do I expect to make the attempt. But I *will* do this. I will outline what I think I would do if I were a manager convinced of the necessity for organizing. This will be a present idea or ideal. If I were confronted with the actual problem I should doubtless do something quite different; at least I hope that it would be different. I would at first assure myself that those owning the business and holding me responsible that a profit should be returned from it, were ready to back up the plans with sympathy and money. Begin at the top again. With that assurance I should determine upon some one to act as safety inspector, engineer, director or whatever designating term might be applied. He should not be responsible for production in any fashion. That is almost the only point that needs emphasis. A safety leader in a plant may come from almost any relation to the business or from no relation provided he have a large measure of common sense and reasonable tact in dealing with men. Many will be inclined to insist that he should have what they will call practical training. Observation clearly demonstrates that some of the

very best safety men acquired all their knowledge of practical mechanics after coming on the job. Now why should not this safety man be partly concerned with production problems? Because if he is so concerned that is likely, indeed ought, to become his primary concern. Production under modern conditions demands undivided attention. If my plant were not large enough to justify occupying all of a man's time with safety problems, I should undertake to ally it with the employing of labor. A central bureau or agent to secure the necessary men is a very essential feature of the best organization and the work of Director of Safety combines with it naturally and effectively.

When I put my safety man in charge and while he was feeling out the situation, I should turn my attention to the method of providing surgical care in cases of injury. I regard this as being in very many cases the weakest link in the provisions for plant safety. No plant however small can regard itself as properly equipped that does not have somewhere about it a place or places properly constructed and equipped for the care of cases of injury. At what point of size a trained nurse should be placed in charge, and when the constant service of a physician should be provided, I do not undertake to say, but experience shows very conclusively that the attempt to economize in such provisions is usually not economy, but parsimony.

Having my Director of Safety and my provision for surgical care established, I should as the next step, establish what I may call a plant commission of safety, sanitation and welfare. Of this commission there would be three permanent members, myself, the director of safety, and the one in charge of surgical organization. With these permanent members, a certain number of department heads should be associated, changed at such intervals that in each year every man responsible for production in a department should serve for some period.

This is nothing new. Calling it a commission instead of a committee, does not change its nature. I have done so rather to emphasize the nature of its duties. It should be a body broadly studying conditions and determining methods, rather than a body attending to details of safety work. The one novelty of my suggestion is the bringing in of medical men. Until we bring to bear on the safety problem, the knowledge which medical men ought to have, we shall not get all the results which are desirable. Observe that I say *the knowledge which they ought to have*. At present the whole problem of factory sanitation is unknown land to many good surgeons. They have given it no thought. It is time that industrialists introduce them to part of their professional duties. Now this industrial commission of mine should be held responsible for studying and formulating a

plan for the entire plant. It might work out in this way. A committee of foremen in each department serving for considerable periods but gradually changing, who give a certain amount of time each month to inspiration and the making of written reports. Perhaps each member of these committees would be particularly responsible for some definite area. In some way these permanent foremen's committees should at times be brought into personal relations with my industrial commission. This would be done in order that the spirit of the movement, its co-operative and democratic character, be duly impressed upon these men who deal directly with the work people.

Then my commission should attack the fundamental problem of arousing and maintaining the interest of every employee. Until the last man on the job is given some notion of the safety idea and of his relation to it, the goal has not been reached. The moment we reach that goal it recedes from us with the influx of new and untried men. Let no man suppose that this effort can reach an end. It must be, in the nature of the case, forever unfinished.

I think my commission would decide to have committees of working men. At least they would study that problem with the utmost care. I am quite sure that they would adopt means of assuring themselves of the familiarity of the men with safety rules and mark in some appropriate manner certain degrees of proficiency.

I think we would vary the routine of these workman's committees sometimes, and instead of sending them out to find unsafe places and practices, ask them to report on the things which they could recognize as being done, not for the sake of production, but for safety. It is very wholesome for all of us, at times, to count our blessings.

Finally, my commission should not stop with the internal conditions which conduce to safety. They should consider whether they might not contribute to the development of stout hearts and vigorous bodies, which are, after all, the best safeguards. For example, a play ground now and then. That is another story—I forbear.

RACIAL DISPLACEMENT IN PENNSYLVANIA INDUSTRIES.

In the first of the series of articles on immigration the general features of the problem in Pennsylvania were discussed. The second article analyzed the nature of recent immigration to the State. In this, the third article, the racial changes in our industrial centers, will be explained.

In the beginning it may be stated that the changes in our agricultural communities and farming districts are not noticeable. While it is true that many Poles, Italians and Hungarians have purchased farms or gone into the dairy business, yet none of these nationalities have in any way supplanted the original stock engaged in agricultural pursuits. Americans, English, Germans and Dutch, still constitute the body of our farming population. But a great change has taken place in our industrial centers, particularly in those places where are located the great steel mills, iron foundries, blast furnaces and coal mines. In these districts where originally native-born American and the older immigrant races predominated, today there are men of all nationalities. This change has gone on so extensively and has affected such a great variety of industries that it is worth the most serious consideration as to its nature and causes.

In the second series of articles we pointed out that early immigration to this State was from western and northern Europe. It included, in large numbers, the English, Welsh, Irish, Scotch, Dutch and German nationalities. Until the early 70's practically no representative of other nationalities came to the State. After that time began to come a few Poles, Lithuanians and Slovaks. The number was not great until about the middle of the 80's. Then followed Italian, Hungarian and other eastern and southern European nationalities, until by 1900 the number of these had increased so greatly as to predominate in the stream of immigration. Since 1900 the earlier type has rapidly decreased, while on the other hand the western and southern Europeans have continued to come in rapidly increasing numbers.

Concomitant with this change in the stream of immigration to the State have gone on similar changes in the great industrial centers. The change in each district has to all practical purposes been similar to that of each of the others. Thus at first in the anthracite coal fields were employed English, Welsh, Scotch and some German miners. Practically all of these men had been experienced miners in their native country, and when they came to this State, naturally

sought that type of employment in which they had acquired the most training. Representatives of these nationalities constituted the working forces in all regions and plants until 1875. After that time Poles and Lithuanians, followed in the 80's by Slovaks, Ruthenians, Syrians and Italians, started a new type of immigration. They were men of little experience in mining, but very sturdy, hardy, and willing to accept employment at the heaviest of manual labor. As the employment of these races increased, the native employees gradually left the mines. This transition is largely due to the fact that the foreign-born laborer of the newer type is willing to accept employment at a lower wage than the native-born employee. He is not encumbered with a family like the native laborer, is able to live more cheaply, and lacks the experience to command as high a wage. Although it is true that the native born has ceased to work at heavy labor in the mines, it is significant that many Welsh, Irish, and English are still employed as managers, superintendents, and foremen, i. e., they have gone into the semi-skilled pursuits.

In the bituminous mines also has gone on a similar transition in the character of employees. Here before 1870 the older stock of English, Dutch, German and Welsh immigrants were employed. These also had had a previous experience in mining in their native countries. A few representatives from southern and eastern European nationalities were employed during the 70's but the number was not great. In 1880 the number began to increase and the real displacement of the English-speaking miner commenced. Nevertheless the final stage of the transition did not take place until during the decade 1890-1900. The first nationality to come in numbers to the coal fields was the Slovak, who came during the early 80's, and was followed in a year or two by the Magyar. Polish immigration began about 1890 and was followed by the Croatian, Servian, and Italian immigration during the next ten years. During the last fifteen years, the period of the greatest immigration to the bituminous region, Russians, Bulgarians, Roumanians, Ruthenians, Syrians, Armenians, Macedonians, Croatians, Servians, and several other nationalities from eastern and southern Europe have come in larger and larger number.

Since 1900, practically no northern and western European laborers have been employed in either the bituminous or anthracite coal fields. Three-fourths of the employees are of foreign birth. More significant is the fact that eight-five per cent are from southern and eastern Europe. Most of them have lived in the United States less than twenty years, while over one-half have resided in the State less than ten years.

The early immigrants were experienced miners. The later immigrants were peasants, farmers, unskilled laborers and handtradesmen who have had no experience in mining. The United States Immigration Commission, which made a rather extensive inquiry into the previous occupations of the foreign-born employed in the coal industry, comments upon this at length as follows: "The greatest proportion of males who were sixteen years of age or over at the time of coming to the United States and who were working for wages were farm laborers before coming to this country. Only small proportions were in other specified occupations and none had any previous experience in coal mining. All those working without wages were farm laborers, and practically all of those working for profit were farmers. Lithuanians show the highest percentage who were farm laborers for wages, while Slovaks show the highest percentage who were farm laborers working without wages. Slovaks, closely followed by Poles, show the highest percentage who were without occupation before coming to the United States." This is also true of females who came to this country over sixteen years of age.

The history of immigration to the iron and steel centers is similar to that into the coal mining sections. It may be roughly divided into three periods—first, the period preceding 1880; second, from 1880 to 1900, the period of transition; third, 1900 to date. Prior to 1880 the native-born white and older immigrant nationalities were employed in the iron and steel foundries and furnaces. After 1880 began to come over Bohemians, Italians and Hungarians. Nevertheless, until 1890 the number of immigrants from northern and western Europe gradually increased, but after 1890, with the exception of the Scots, comparatively few were employed in the iron and steel business. It was during this period that the southern and eastern Europeans began to predominate. Beginning about 1900, Slovaks, Magyars, Italians, Croations, Poles, and Russians furnished the chief supply of labor for the industry.

Immigration to Johnstown is typical. The order in which various foreign nationalities came is as follows: Welsh, 1852; Irish, 1855; German, 1858; English, 1858; Slovaks, 1880; Polish, 1880; Magyars, 1885; Croations, 1897; Servians, 1897; Italians, 1900; Syrians, 1903; Macedonians, 1905. More than one-half of those at present employed in connection with the steel mills are of foreign birth, and the larger proportion of these are from southern and eastern Europe. Hungary appears to have contributed the largest number.

In the Pittsburgh district approximately 26 per cent of the male employees in the iron and steel industry have been in the United

States from five to nine years inclusive; about seventeen per cent, twenty years or over; ten per cent, three years; four per cent, one year and two per cent less than one year. Recent immigrants to this district generally enter the steel mills immediately upon arriving.

In the beginning, the steel plant drew many laborers from the coal fields. But owing to the rapid expansion in both industries, the supply of labor became inadequate to meet the demands. Accordingly, officials in charge of the steel plants took active means of securing employees. An early method was to send an official to some of the large eastern cities, especially New York, to gather up a group of laborers who were willing to engage in this form of employment. Other companies engaged labor agents to secure gangs of laborers for shipment to the steel districts. A more common practice, and one which is engaged in quite largely at the present time, is advertisement in the foreign-language newspapers of the large cities where immigrants are congregated. The second of these methods is considered unsatisfactory.

The causes for racial displacement in the industrial centers are economic. In the beginning, the supply of local labor was adequate to meet the demand. Furthermore, most of the available laborers had some experience in the mining, and in the iron and steel industries. It was natural, therefore, for the large companies and firms to draw upon the native-born population to supply whatever labor they demanded. But with the rapidly expanding output, coupled with an increasing demand for labor due to general industrial development, the supply of local and native labor became wholly inadequate to meet the needs. Inducements were then held forth to invite labor from other countries. Once these immigrants became established at suitable and profitable employment, they wrote back to their families and friends telling them of the high wages and great industrial opportunities, thus inducing the many thousands to begin migration to the United States. Two causes can, therefore, be assigned as the impelling forces back of racial displacements in Pennsylvania industries—first, the rapid expansion of our industries, coupled with the inadequate supply of native labor; second, the advertisement of industrial opportunities by the newer immigrants from southern and eastern Europe. At first such displacement was regarded as unfortunate, but in view of the fact that the supply of native labor was inadequate to meet the demands of our great industrial development, a change of attitude is rapidly taking place. Employers and the State at large are coming to see that without alien labor, it would be wholly impossible to carry on some of our greatest industries. They are now looking upon immigration, therefore, as a normal and natural source of supply.

LIGHTING, ITS EFFECT ON EFFICIENCY, SAFETY AND FIRE PREVENTION.

The proper lighting of workrooms, storage rooms, passageways, and stairways is a subject which is beginning to receive the attention which is its due. It is being realized more and more that adequate lighting is a necessary element when we consider all the items which enter into safety, welfare and efficiency work.

Very little attention was formerly paid to the fact that it was utterly impossible for a workman to do his best when handicapped by poor light. Today we find in most new factories which are being erected ample facilities provided for letting in God's good sunshine. Many firms are so much interested and so proud of their buildings that they show pictures of them in their advertisements and make note of the fact that their products are turned out by contented workmen in pleasant surroundings. A glance at any picture of recently built factories will show the large extent of wall surface which instead of being covered up with brick or metal is composed of panes of glass. A trip through these factories will also disclose the fact that this glass is kept clean.

Too often inspections throughout this State have shown window panes in factory buildings which were so heavily coated with grime, dirt and cobwebs on the inside and on the outside, that it was almost impossible to tell they were window panes. The fact that it was deemed necessary to place them where they were, should also show the necessity for keeping them clean.

The excuse is often offered, that "I never thought about it" or "We don't have time to attend to such little matters." There are a few persons who possibly don't care but it is believed that they are few and far between. It seems that the great trouble is, because the matter is never given a thought. It is reasonable to assume this, as uncleaned windows will be found to be just as prevalent in offices as in the workrooms. The criticism that is often made by some employees—"Oh, they don't care whether we can see or not"—is therefore one which is not justified. Experience has shown that the matter has not been thought of or, if it has, it has simply been put off to a more convenient season.

The object then of this article will be to point out briefly facts which, although they are known to everybody, are seldom given the thought and attention which they deserve.

In the first place no one would venture to state that a workman could work to his full capacity unless the light necessary for his

work is adequate and properly placed. Poor illumination will decrease his efficiency through slower movements, inaccuracy of work, and increased eye and nerve strain.

It may, therefore, well be considered one of the most important factors of efficiency. In a great many places, however, it receives no attention from this standpoint. How many times when one goes into a machine shop will they not see an electric light bulb or a lighted gas jet above the lathe or other piece of machinery hung about level with and just in front of the operator's eye. In a wood-working shop, in many instances, there will be found the same condition. A shade properly placed to direct the rays of light downward on the work instead of in the workman's eye would mean more comfort for him, and would lessen the chance of serious eye strain in subsequent years. In the matter of natural light, how much better if the light should come over the operator's shoulder than to have its full glare strike him in the face. Cases have been known where operators working in front of windows with the light shining into their eyes would have to rest their eyes or close them for a few moments before the pupils were dilated enough to enable them to distinguish objects in other parts of the workroom.

It can readily be seen that there can be too much or too little light. The management which is striving after efficiency will, however, see that adequate light is provided.

Light is another great factor in the matter of accident prevention. Statistics have proven that the largest percentage of accidents occur during the winter or dark months, or during the hours of the day when the light is beginning to diminish. In this Department many accident reports have been received which show that many accidents are due to lack of light. Workmen have been walking along dark passageways and have tripped or stumbled over articles or tools lying on the floor. In their falls they have received slight or serious injuries. They may have cut or bruised their arms or legs by falling against pieces of machinery or have been seriously burned by touching heated objects in trying to recover their balance. In walking towards lights which have not been properly shaded they have in some instances been blinded so as not to be able to observe moving objects coming towards them.

Improperly lighted stairways are another fruitful field for accidents. A light is sometimes found at the top and bottom but in the center of the flight of steps where they turn upon themselves, no light has been provided. Such places and all landings should be sufficiently illuminated to enable one to see his way without difficulty.

Another important matter into which lighting enters is the matter of fire prevention. In too many instances in factories, theatres,

hotels, and apartment houses are store-rooms, closets, corners or unfrequented places used for storage purposes, where lights are not provided. If a certain article is wanted which has been stored in these places, the person who has been sent for it will strike a match or carry an open flame while looking for it. In many instances they either carelessly throw the supposedly extinguished match on the floor, or in a corner among litter, or the open flame which they have carried has unnoticed come in contact with some other combustible material. A small fire has thus been carelessly started. This may smoulder for hours unnoticed but eventually break out with disastrous results.

Inspections throughout the state have disclosed this fact in practically every establishment. It can readily be verified by going to any storage place, closet, or dark corner, where no light has been provided, and burnt match sticks will invariably be found lying on the floor. Owners and proprietors to whom this demonstration has been given have been astonished at what has been disclosed, especially those who have issued orders that no matches should be used around their plants. Very frequently more are found in those establishments than in others where conditions do not require such rules. The only way that regulations of this nature will be obeyed is to have all necessity for using matches removed. This can readily be accomplished by having all seemingly out of the way places, although used for storage purposes, provided with proper lighting facilities.

To sum up then, light is a factor which should be considered from the standpoint of efficiency, safety, and fire prevention and it is hoped that more attention will be given to it in the future than has been done in the past. Let there be a general cleaning of windows and let all artificial lights be properly shaded in the immediate future in the factories of this Commonwealth.

MAKING EFFICIENT EMPLOYEES.

Considerable difficulty from time to time is experienced by many business managements in having work done properly by employees. Often men are heard to express the opinion that "It is impossible to find the proper help that we need." Especially is this true in regard to employers of large numbers of clerical help. They complain that initiative is lacking, carelessness is prevalent, and indifference is shown to their work. Investigation has also proven that in many instances this sentiment is found to prevail in other lines of business.

On the other hand, we find many cases where employers express their appreciation and commendation of the work which is being turned out by their subordinates. They claim that they have the best workers that can be had and that they are always willing to do everything that is requested of them and that they do it well.

There evidently must be some difference in the systems used by these two classes of men and it is for the purpose of calling attention to this difference that these lines are written.

In former days, the rudiments of an education consisted of a knowledge of the three Rs—reading, 'riting, and 'rithmetic. Today in the business world, we may claim that the successful manager of men is one who uses the three Rs in his system; only he gives another designation to the Rs. He plans to have the RIGHT MAN in the RIGHT PLACE working the RIGHT WAY. It has been found that if this rule is put into operation, not only will the employees be contented and work with a greater degree of efficiency, other things being satisfactory, but the employer will also feel that he has competent helpers and ones that are working to the best advantage.

In the sporting world recently an illustration has been presented in the shape of the baseball team of Boston where generalship and management have made experts and champions out of what was, six months ago, considered to be cast-off material. Many people consider the performance of this team wonderful and many people ask, "How was it accomplished?" In answer to this question a prominent weekly has recently quoted John J. Evers, captain of the team, as saying that it was entirely due to the skillful administration of the manager, George Stallings. He says "Stallings first sizes up a player, and if he thinks he is of the type that will have his spirit broken by 'riding,' he encourages him, jollies him along, and does little scolding. But with the other type of player he is different. If a man is inclined to take things too easy or be careless, he can

give him one of the best tongue lashings I have ever heard, and I have listened to a good many. He gets these men so that they will go out and fight to the finish, fearful lest they may do something which will displease their boss. The Boston boss is an optimist about ball players. No matter how bad a man looks, he generally has a good word for him. 'I believe something could be done with him, if he were handled right,' I have heard Stallings say frequently about a man, and he sticks to his views in the face of any sort of adverse criticism."

This policy which worked out so admirably during this past baseball season is one which should seriously be given consideration by every person who aspires to become a leader among men. More and more large manufacturing plants are realizing that some men are better fitted than others to perform certain duties. They have a standing rule that where an employee is found to be unfitted for a particular department, he is given a chance in every other department of the plant, before he is discharged as being incompetent. This determination was reached after it had been found that some men, who had been considered absolutely worthless by foremen in one part of the plant were found, after trial in other departments, to be among the most valuable men in that department. A little thought given to the subject should surely convince any one that this is the proper method of dealing with this problem.

We are all aware of the fact that every one is not a doctor, nor a musician nor a skilled mechanic. Some of us excel in one thing and some in another. To one detail work appeals, while to another it is distasteful. Persons who have a large experience with people of different characteristics and ambitions claim that every one has some characteristic, skill, talent, or aptitude which would make them particularly skillful in a certain line of work. The successful leader or manager should try to ascertain in each person under him what talent or what skill that is and then assign him his work along that line. He will find that if this is done the results will be astonishing and those who have never shown any surprising activity in the positions they hold will develop into useful and efficient employees.

The suggestion is therefore offered that whenever conditions arise where employees do not give the desired satisfaction in their work that they be given an opportunity to show their talents in some other direction, before their services are permanently dispensed with. Many employers have testified that they have tried this out very extensively when industrial conditions have been such that workmen were scarce and it has worked out so well that they now have made it a permanent policy.

Usually wherever the size of the plant warrants it, an employment bureau is established in charge of a competent person. Through this bureau all needs for new help are supplied and no worker is permanently discharged, unless he has been passed upon by the person in charge of this bureau. The latter makes every effort to place this man in work for which he is fitted and which is congenial to him.

Let us, therefore, in the future endeavor always to put the **RIGHT MAN** in the **RIGHT PLACE**, and time, experience and teaching will finally lead him to perform his duties in the **RIGHT WAY**.

COMPLAINTS.

From time to time various members of the inspection force of the Department receive complaints to which they are asked to give their attention. The officials of the Department are ready at all times to receive them but it is thought wise to call attention to some of these complaints which involve matters over which the Department has no jurisdiction. On numerous occasions girls have sent in letters which stated that they were compelled by their own parents to work all hours of the day and night in their own homes. Complaints of this nature cannot be given any attention, as domestic and farm labor are exempted from all provisions of the Woman's Labor Law. The Minor's Act does not cover these cases either, even if the children are under legal age. The law does not permit interference by any state department in family matters of this kind. If the abuse of parental authority is flagrant, the attention of the proper court officials should be directed to it.

Not long ago a complaint was sent into one of our branch offices stating that the driver of a team was compelled to overload his team. The driver was the complainant and he stated that he thought more of his horse than he did of his boss and he wished the Department to use some method of preventing this practice. Manifestly, the only thing the Department could do was to refer him to the Society for the Prevention of Cruelty to Animals and tell him that he should ask them to take up the matter.

By far the greatest number of complaints which reach the Department are based on statements made by discharged employees or

jealous persons. Letters are received or personal statements are made that certain employees are required to work beyond the legal limit. When the inspectors visit these places and interview the employees, the latter state positively that they are not required to work other than the official hours posted. An examination of these posted hours show that they are not illegal. In a great many cases these statements of the employees are, no doubt, untrue but it is sometimes impossible to verify them.

Anonymous letters and messages may give clues to violation but in order that these communications receive the proper consideration any well-meaning person should be willing to endorse the message. A short time ago a complaint was sent into the Department stating that women employees in a certain underground establishment were compelled to work all night. An investigation of this particular complaint disclosed the fact that no females were employed in this establishment at any time during the day or night. As the name of the complainant was not given, the matter could not be looked into any further and, no doubt, criticism was directed against the Department for not remedying this condition. It may be that the right establishment was not given in the first place but it was impossible for the Department to verify this. The necessity for messages bearing the name of the writer can, therefore, be seen. Any information received will be treated confidentially and names of persons giving the same will not be divulged to any one.

POSTER FOR WORKROOMS WHERE LEAD PRODUCTS ARE HANDLED.

The Department has recently issued a poster, 11 x 14 inches, in size, for use in workrooms wherever lead products are handled. The following suggestions to employees to prevent lead poisoning are given:—

Lead poison is usually taken into the system through the mouth.

Do not put the fingers in the mouth.

Do not take food while at work.

Before eating and before leaving work, wash the face, hands, and arms with soap, and thoroughly cleanse the mouth and nose.

Do not go to work on an empty stomach; this practice weakens the system and makes it more liable to be poisoned.

You must not eat lunch in the same room in which lead or other poisonous materials are handled.

Take a bath frequently; cleanliness is the best preventative of lead poisoning.

Do not chew tobacco while at work. In handling tobacco, the lead dust is carried from the hands to the mouth. Chewing tobacco does not prevent the user from swallowing lead dust.

Do not drink alcoholic liquors while at work, or better, avoid their use entirely. Whiskey does not cut the lead in the system, as a great many suppose. Alcohol always weakens the system and makes it more susceptible to lead poison.

Drink plenty of good milk; it is a valuable preventative of lead poison.

Keep the finger nails clean and cut short, so the poison will not collect under and around them.

It is better not to wear a mustache or beard; they collect the poisonous dust. If worn they should be cut short and kept clean.

You must not carry poisons home. Overalls and caps should be worn during working hours and left in the shop at night. They should be washed frequently.

Whenever constipated, take at once a dose of Epsom or Glauber's salts, or other harmless laxative. It is exceedingly important that the bowels be kept in good condition.

When sweeping always dampen the floor or sprinkle it with sawdust to prevent raising dust, or use vacuum cleaner.

The handling of dry lead or other poisonous materials should be done in a separate room, as far as possible.

Where workmen are compelled to work in poisonous dust, they must wear a respirator, furnished by employer.

If a workman finds himself easily affected by lead, he must leave the trade at once, and thus avoid serious trouble.

If ill, consult a physician at once. Delays may mean serious danger and loss of time.

A limited number of these have been printed for distribution and all requests for the same will be supplied as long as they last. It is suggested that they be placed in all workrooms wherever lead products are used, such as paint shops, white lead works, storage battery workshops, etc.

These posters have been printed in four languages, namely, English, German, Polish and Italian and in making requests for copies, kindly specify what languages are desired.

SECOND ANNUAL PENNSYLVANIA INDUSTRIAL WELFARE AND EFFICIENCY CONFERENCE.

The Second Annual Pennsylvania Industrial Welfare and Efficiency Conference which was held in Harrisburg on November 17th, 18th and 19th proved a very great success and the publishing of the proceedings will commence in the December issue of this bulletin.

DISCUSSION DURING THE 1913 CONFERENCE.*

Mr. L. H. Burnett, Carnegie Steel Co., Pittsburgh:

"Mr. Chairman, Ladies and Gentlemen: I think we were all very much interested in Dr. Chaney's paper as the subject involves probably one of the most important elements in safety work; that is, plant organization. It may be of interest to you, certainly of great interest to me, to relate briefly an experience we had with one of our large plants. The superintendent of that plant was a progressive, up-to-date, hard-fisted mill man. When the safety idea was first proposed to him he did not take very kindly to it. We kept everlastingly at it and he finally became a convert. He called a meeting of his superintendents and foremen and delivered to them what to my mind was the best safety talk I have ever heard. He had before him the statistics and figures of accidents that had occurred in his plant and called their attention to the number of them that could have been prevented by due precaution. He did not in any way attempt to protect the company and told them that the company had been responsible for some of these accidents. He appealed to them for co-operation and asked them to find fault with anything in the plant that was not what it should be. He appointed a permanent safety committee. That was some nine months ago. The work has progressed there, I think I can say truthfully, more rapidly than at any place I have ever been. They have what they call floating committees of the workmen themselves. I am not telling this as a new idea. It is an idea that has been in force at a number of plants for several years. But the thing has worked out beautifully and my own personal opinion is that the two most important elements in safety work at any particular plant are first, to get the interest, the intelligent co-operation of the boss himself, and next, and just as important, to get the interest of the man on the job. It is the men on the job who know those dangerous conditions better than anyone else and they should be given an opportunity to tell about them. A half day of each week is spent by the workmen's committee in going through their department, looking into the dangerous places and reporting to the general committee. I want to say that those committees have made more than 900 recommendations and out of those 900 the general committee has rejected only five, which shows that the man on the job knows what he is talking about.

*Part of the proceedings of the First Pennsylvania Industrial Welfare and Efficiency Conference held at Harrisburg, October, 1913.

The thing to do is to get him thoroughly interested in the safety idea. As I say, these men not only examine conditions in their own department, but once a month instead of examining their own department they are assigned to some other department in the mill. Now, the purpose of that has been to create a friendly rivalry among the different departments of that plant. Above all else, and I have nothing more to say, it is necessary to get the support and the enthusiasm of the boss. If you have got that, the rest will take care of itself. The trained safety man to-day can walk into any plant in this State and before he is there fifteen minutes he will be able to say to you whether the boss is favorable to this safety movement."

Mr. Carl M. Hansen, Workmen's Compensation Service Bureau, New York City.

"I think the last statement made by a previous speaker might create the wrong impression. He said that in his opinion the day of the showing of pictures of mechanical safeguards is nearly past; that from now on, we would have to devote our time to the education of the workman. That is true as far as United States Steel Corporation is concerned, but it is most decidedly not true as far as the rank and file of employers in the State of Pennsylvania or in any other state of the Union are concerned. The experience of the United States Steel Corporation is a benefit to us simply insofar that it shows what can be done by systematic, co-ordinate, co-operative methods, but we must not forget that, although that corporation in approximately ten years in many plants has reduced serious and fatal accident by seventy per cent, we are dealing there with a homogeneous corporation. They are under one central executive management and can work co-ordinately. Compare this, however, with the State of Pennsylvania, Mr. Chairman, with twenty-seven thousand different manufacturers, with no interest in common in many respects, and in many instances being in competition; the cases are not analogous. I simply desire to impress upon you gentlemen not to let over-enthusiasm run away with you. We have had statements made here and I have listened to similar statements in various state legislatures where it has been said by the advocates of legislation for State Factory Inspection Departments, 'If you will pass the laws and give us the appropriation asked for, we will reduce the industrial accidents from fifty to seventy per cent.' Such statements are made on the basis of the experience of the United States Steel Corporation, but it is an erroneous comparison, and the conclusion will be wrong. May it not be well for us to realize that? We are indeed indebted to the United States Steel Corporation for all that they have done.

They have in the accident prevention field in the United States, shown us what results can be obtained, but we must not get over-enthusiastic and believe because they have reduced accidents in their plants over a given period a certain percentage, that the same result will obtain in other industries. I do not believe for one moment that the speaker desired to create that impression, and I do not desire either to infer that anyone present here did not appreciate that it was only applicable to the United States Steel Corporation. I always believe, however, in giving a little more than we promise and therefore would deplore anyone leaving this conference without a clear appreciation of the task undertaken; this was my reason for raising the point.

I thank you."

Mr. Albert R. Jerling, of Pittsburgh.

"I have been very much interested in the pictures shown upon the screens, but there is one thing that I have not seen and in my mind it is a part and a most important factor in your social welfare work which has been overlooked. This is the man who operates the public utility, known as the street car. Not only do these railroads run through the country districts, but they run right by your very door, which makes it all the more dangerous. I have not seen any pictures of the street cars and the operating conditions. We haul more people per day than do the steam railroads; not only do we haul your wives, your children, and the working men in the various cities, but we also haul the public in general. No one knows any better than do the street car men, when we have a little mishap or accident, and upon getting names for witnesses, the personal cards we receive and the many different states they are from. Now those who have spent years in the street car service, are deserving of some attention. Much can be done along this line by giving us protection. A frozen man can't work any better than a roasted one; both have the same trouble, rheumatism.

It has been through evolution that these great changes were brought about; we were not always speeded up to the highest pitch as we are to-day.

In the days of the horse car, travel was much slower; occasionally the driver could drop into a drug store to get some change and at the same time get warmed up a little, but when a motorman has to stand on the front of a summer car on a frosty morning, it makes him feel as if a cold blast in winter was hitting him. It may be all right to those who only have to go a short distance, but when it comes to the motorman standing on the front end on a bitter cold day, it is a different proposition. He has to face the storm. In a

climate such as we have in Pennsylvania, it may rain one hour and blow the next, and of course we have to take it as it comes, so we ask for vestibules. In addition to this, we have to contend with the running board; this is not only dangerous to the conductor, but also to the general public, especially where the car runs on narrow streets. Quite frequently I have seen little children sitting out on the curb in danger of being hit by the running board. These are some of the conditions that have been overlooked in your welfare work, and I desire to call your attention to them, so that you can give us some consideration and help to abolish the running board. Not only do we desire this, in order that we may be able to prevent accidents, but also that we may be more fit physically, by having better strength to do our work.

There is another important thing to be mentioned, which also has not been shown upon your screen here.

As we do not come under the inter-state transportation laws, because very few of the street cars go out of the state, we do not have the advantage of the law compelling the use of the automatic coupler. There are a great many trailers to be hauled and hence we have to use a link coupler. We do not have sufficient room to get through and if we happen to get too close the coupler will fly up against your shin bone, and although you may not feel it when you are in a hurry, it leaves a scar. When a person is advanced in years, it is pretty hard to get a thing like that healed up, and the first thing you know you have a troublesome and perhaps a dangerous wound.

I especially call the attention of the ladies present to this condition, because they have been an important factor in the work of helping to obtain better conditions. I thank you for your attention, and trust that you will do something along these lines."

Mr. R. J. McGrath, Pattern Makers' Association, Pittsburgh:

"The Department of Labor and Industry without a doubt deserves great credit for the calling of this convention to give all of us a chance to express our views. I want to take this opportunity, which will only occupy a minute, to dwell on the subject of some of the woodworking machines in the manufacture of patterns. I have possibly seen all the pictures thrown upon the screen during this entire session. And only a few safety guards were shown on the joiners and circular saws and band saws. I come from Pittsburgh. I have been around the district all my life, and I have failed up to this time to see the machines guarded. I want to tell you, Mr. Chairman, Ladies and Gentlemen, that it is not a very nice matter to look into. We have an organization there of almost five hundred men

and some of the hands and fingers which you will see on those men would make your heart ache. Now, where they got those photographs of the machinery safeguarded, I don't know, but I am sorry to say that none of them have been taken in Pittsburgh. I realize further that this department is practically in its infancy and I am not going to blame anybody. I believe the Department is doing the best it can, and all I can say is that I am at your service any time, and wish you success."

Doctor Lucien W. Chaney, Bureau of Labor Statistics, Washington, D. C., said:

"We have heard our American situation criticised with great severity and with great justice on numerous occasions. What really is the condition of American industry in the matter of accidents? How does American industry compare with foreign industries in that particular? The figures which the Federal Bureau has now assembled show this: that American industry is better than foreign industry, and worse. No European country is uneven in this matter of industrial accidents. If you take a given class engaged in a given kind of industry, you can tell, in the German Empire for example, very closely what accident rate that establishment will have. It will have almost exactly the average of all the establishments engaged in that sort of industry. On this side of the water the condition is entirely different. We have very good establishments and we have very bad ones. The fact that we have very bad ones, in which the accident rate is very high, gives us our reputation. We get the reputation of having the worst establishments in the whole list. Suppose for instance, we compare ourselves with Germany. The only figures which have been compiled in detail and which it is possible to quote, are those concerning our iron and steel industry. If any of you are interested in the figures themselves, which I shall not attempt to give, the Bureau of Labor Statistics in Washington will be glad to furnish you a copy of the report which is issued by the iron and steel industry. Now, what do these figures show? They show that more than fifty per cent of American establishments in the iron and steel industry are better than the average German establishment. The average rate of all establishments, good and bad, in America is better than the average rate of Germany in the iron and steel industry. Why should we have a reputation of having so serious an accident condition in our American iron and steel establishments? (These figures, of which I speak, were for the year of 1910.) There are two reasons. There are concerns in this country which have taken so little thought for the protection and conserva-

tion of their employees that they have an accident rate which would never have been tolerated in any European country.

Let us face the fact that we have establishments in this country whose operators seem to be entirely indifferent to the loss of lives and limbs of their working people. On the other hand, we have establishments of a character so much superior to the very best establishment to be found in Europe that our average accident rate is lower than theirs. What we need to-day is to level up to the really high level that has been established in the best concerns, which number much more than half of our American plants. During the time which has intervened, since 1910 I know the standard has gone up. It seems only just to our American industries that these facts should be clearly stated. On the average we are certainly on a par with the best European countries. On the other hand there is the other exceedingly humiliating fact that we still have those conditions that are so much worse and our industries must suffer in comparison."

Mr. John Whitehead, Textile Workers of America, Philadelphia.

"I believe it would be a great thing if the working people in the factories, mines, and so on, were given a little more information or instruction in connection with the prevention of accidents, and the caring for injuries. Oftentimes, what appears to be just a slight injury turns out to be a very serious one, because of the fact that the men in a certain room are not able to stop the wheels there, which so very often happens. In many cases, they are at a loss as to how to proceed. They have to find some special person, and it takes so long that serious injury takes place, whereas it could be avoided in many cases. This applies in many different ways. Fires could be prevented in many cases by the workers themselves, had a little information and instruction been given to them. Possibly they would conquer the fire, whereas under present conditions in many factories there would be simply a rush to the fire escapes and towers. There has been no previous practice from their standpoint, and there is a great lack of system.

I am not one who has an opportunity to get statistics; the way I get my statistics is by actually coming in contact with the conditions in the mill. I have worked in every textile state of importance, and I don't need statistics. I have a method of my own, which I wish to state. When I go into a shop or factory, I take a walk around and I can pretty nearly tell you something about statistics in this way. If I see the men, women, boys and girls in a certain condition, I can come very near knowing a mighty lot about statistics so far

as they are concerned. In fact, it would take mighty good statistics to change my convictions in relation to them.

Speaking of European conditions in comparison with those in the United States, I believe that a great many things enter into the proposition. The speeding up system of which we have heard so much, I believe, is one of the great factors that leave our workers so much worse than those in Europe. And I believe that is the one thing that should guide our force because, to my mind, unless you have a fine physique, the race is impossible. The brain is a part of a man's physical make-up and it would be unfair in so many ways under unfavorable environment, if the man were speeded up to the highest pitch. Oppression in any way is against the best interests of society, as well as the individual. I believe we should encourage the individual to stretch out in every direction. We should not oppress men, but encourage them to physical and mental superiority. If we want to maintain our position in relation to the Nations of the World, we will have to do that. I am making these few remarks, so that you will not be misled by statistics. Most of us cannot deny them, cannot disprove them, but still I believe we have a method of looking at society and its individual members that would leave us fairly safe in our judgment as to whether we were proceeding along right lines or not."

Mr. John Hoehn, Business Agent, Brewery Workers' Union, Pittsburgh:

"I just wish to recall to the audience some of the first words spoken in this hall by His Excellency, John K. Tener. He said that speeches and fine words would not bring results, and I perfectly agree with him because speeches have never brought very great results. I wish to suggest to the Committee, who is in charge of this proposition, that more co-operation would be one of the greatest things to bring about results. I believe the forming of local boards who would work in conjunction with headquarters and probably having a convention every year, would bring very great results. We have the laws. We created a Department of Labor and Industry. It is up to somebody else to interpret that law, and it is up to somebody to execute that law. I don't know which is the most important, but in my opinion, the execution of the law is the most important, because if the law is not executed, it is of no value whatever. You have, at the present time, a corps of factory inspectors, but I am convinced that the execution of the factory inspection laws has not been what it should be. I am not speaking of the present administration because I believe they intend to make good. I wish to say

that also one of the most important things is, not alone to guard the machinery, which has brought misery by taking away from a man not only his limb or life, but also has taken away steady employment and thereby created a great rank of unemployed in addition. Whenever a machine replaces a man, there are no provisions made for that man to support himself and his family. You always find that wherever machines go in, the number of men are reduced. It has destroyed the relationship between the employer and the employee. Therefore, one of the points which should be given consideration under this new department is the bringing back of the relationship between the employer and employee. You can't tell me that a man can do his best work when he has trouble at home, when he does not have enough money to pay his doctor bills, or has to go to work without breakfast. It is impossible for that man to feel happy and contented. All of your safeguards cannot alter these conditions, unless you do something to change the social conditions and give the man and his family enough to eat. Give these men a fair wage and you will find that there is happiness. It will help to bring back the proper relationship between employer and employee and will do more than all the safeguarding possible. I wish to say that I am delighted to have been present at this conference, and I shall leave feeling that I have been much benefited."

Mr. M. C. Goodspeed, Chairman of the Safety Committee, General Electric Company, Erie:

"I have been benefited very greatly by these discussions and I can go back to Erie with a greater knowledge and tell the men there new ways of meeting their conditions which will help them. We have been endeavoring to make everything as safe as possible for the men. We have a committee of the men who are working with me in inspecting dangerous conditions, and as they are reported, we have endeavored, as fast as possible, to safeguard them. Whether it is a matter of guards on tools, open manholes, or whatever the condition may be, every effort possible is being made to meet the conditions. I am mighty glad that this gentleman who has just spoken has emphasized again the subject of co-operation. It is one of the most important things that has been emphasized in this meeting, and I simply want to speak of it again to say that I have found that the men as a whole are co-operating with us in taking advantage of the safeguards as they have been applied. We do find, however, that some of the men will not co-operate. We do find that some of the men themselves will remove the guards, or will not use them when they are supplied. For instance, we are supplying goggles, free of charge, to

every man who is chipping or grinding. We are trying to enforce the wearing of the goggles, but we are experiencing difficulty in having the men wear them. A man told me this week that he did not want to wear goggles because they bothered him a little in seeing his work, and he thought he could keep chips out of his own eyes. That is a typical example of a few men, and only by co-operation of all the men can we get the greatest degree of safety. We must show the men who are not willing to use these guards that they must use them because if they do not use them, they will injure, not only themselves, but their families. It is not only the men who are going to be hurt. One of the things that every one of us can take back home is the subject of co-operation, and the fact that injury to the man does not injure him alone, but it injures his family, the community, and everything connected with him.

One of the speakers to-day mentioned the subject of 'fool' accidents. I wish to emphasize that again, and I hope the men as they go back will call attention to the fact that some of the employees are always trying experiments and are not being careful. This usually results in 'fool' accidents. It is this class of accidents that calls to a great extent for the necessity of education. Older men cannot see these things. It is hard to get it into their heads, but if we can get the children as they are coming up now, the apprentice boys in the factory, to see what these things lead to and to grow up as careful workmen, then we will have less of this class of accidents.

I wish to emphasize again that the men should all co-operate and that they should help in using and applying the suggestions which are given for safety, and I am certain that those in charge will be glad to have the men bring to them any suggestions and will aid them in improving the conditions."

Doctor Lucien W. Chaney, Bureau of Labor Statistics, Washington, D. C.:

"I want to say a word about the matter of the workman refusing to use the guards provided. I have been studying that question for a number of years, and have come to the conclusion that in a majority of cases where the workman refuses, it is because the guard is a bad one. Those who have provided goggles for their workmen have, at first, usually provided bad goggles which no human being ought to keep on fifteen minutes. The question of a perfectly satisfactory goggle has not as yet been settled. A large number of them have been offered to the working men, but they have been so poor that nobody ought to try to use them. There are a few articles of that sort which I believe are practical but a considerable proportion of

those which have been sold to well-meaning employers should not for a moment be used by the workers. Whenever a workman refuses to use a guard, it ought to raise a very serious question as to whether it is a good one or not. A good many times, you have got to dig under the surface of the situation very carefully before you find the real reason for discarding these safety devices. I saw a whole roomful of chippers the other day, and all of them were wearing goggles. They were good goggles and they had gotten to the point where they asked for them, rather than having to be urged to use them. When you offer the workman a satisfactory and workable guard you will rarely have any great difficulty in getting him to use it.

Now another point which has been brought out. I deny absolutely that you cannot reach the old man. The older man is more conservative and more 'sot' in his ways than a younger man, but the younger man is a good deal more frivolous. I tell you that the older men in the employ of industrial establishments are intelligent men; they are not by any means so reactionary as is sometimes intimated by those who talk about them. It is not impossible by any means to reach and convince the older men in the industries."

